MIB REFERENCE GUIDE

Extreme SLX-OS MIB Reference, 17s.1.00

Supporting the Extreme SLX 9140 and SLX 9240 Switches

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Contents

Preface

Document conventions

The document conventions describe text formatting conventions, command syntax conventions, and important notice formats used in Extreme technical documentation.

Notes, cautions, and warnings

Notes, cautions, and warning statements may be used in this document. They are listed in the order of increasing severity of potential hazards.

NOTE
A Note provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

ATTENTION
An Attention statement indicates a stronger note, for example, to alert you when traffic might be interrupted or the device might reboot.

CAUTION
A Caution statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.

DANGER
A Danger statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations.

Text formatting conventions

Text formatting conventions such as boldface, italic, or Courier font may be used to highlight specific words or phrases.

Format	Description
bold text	Identifies command names.
	Identifies keywords and operands.
	Identifies the names of GUI elements.
	Identifies text to enter in the GUI.
italic text	Identifies emphasis.
	Identifies variables.
	Identifies document titles.
`Courier font`	Identifies CLI output.

Format	Description
	Identifies command syntax examples.

Command syntax conventions

Bold and italic text identify command syntax components. Delimiters and operators define groupings of parameters and their logical relationships.

Convention	Description
bold text	Identifies command names, keywords, and command options.
italic text	Identifies a variable.
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ **x** | **y** | **z** }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, for example, passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, *member*[*member*...].
\	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Extreme resources

Visit the Extreme website to locate related documentation for your product and additional Extreme resources.

White papers, data sheets, and the most recent versions of Extreme software and hardware manuals are available at www.extremenetworks.com. Product documentation for all supported releases is available to registered users at www.extremenetworks.com/support/documentation.

Document feedback

Quality is our first concern at Extreme, and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you.

You can provide feedback in two ways:

- Use our short online feedback form at http://www.extremenetworks.com/documentation-feedback-pdf/
- Email us at internalinfodev@extremenetworks.com

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Contacting Extreme Technical Support

As an Extreme customer, you can contact Extreme Technical Support using one of the following methods: 24x7 online or by telephone. OEM customers should contact their OEM/solution provider.

If you require assistance, contact Extreme Networks using one of the following methods:

- GTAC (Global Technical Assistance Center) for immediate support
  - Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact.
  - Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- GTAC Knowledge - Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- The Hub - A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- Support Portal - Manage cases, downloads, service contracts, product licensing, and training and certifications.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

About This Document

What's new in this document

On October 30, 2017, Extreme Networks, Inc. acquired the data center networking business from Brocade Communications Systems, Inc. This document has been updated to remove or replace references to Brocade Communications, Inc. with Extreme Networks., Inc., as appropriate.

Supported hardware and software

In those instances in which procedures or parts of procedures documented here apply to some devices but not to others, this guide identifies exactly which devices are supported and which are not.

Although many different software and hardware configurations are tested and supported by Extreme Networks, Inc. for this SLX-OS release, documenting all possible configurations and scenarios is beyond the scope of this document.

The following hardware platforms are supported by this release:

- ExtremeSwitching SLX 9140
- ExtremeSwitching SLX 9240

NOTE

Some of the commands in this document use a slot/port designation. Because the SLX 9140 and the SLX 9240 do not contain line cards, the slot designation must always be "0" (for example, 0/1 for port 1).

Overview

Simple Network Management Protocol (SNMP) is a set of protocols for managing complex networks. SNMP protocols are application layer protocols. Using SNMP, devices within a network send messages, called protocol data units (PDUs), to different parts of a network. Network management using SNMP requires three components:

- SNMP Manager
- SNMP Agent
- Management Information Base (MIB)
- Port Information

SNMP Manager

The SNMP Manager can communicate to the devices within a network using SNMP. Typically, the SNMP Manager is a network management system (NMS) that manages networks by monitoring the network parameters, and optionally, setting parameters in managed devices. Normally, the SNMP Manager sends read requests to the devices that host the SNMP Agent, to which the SNMP Agent responds with the requested data. In some cases, the managed devices can initiate the communication, and send data to the SNMP Manager using asynchronous events called traps.

SNMP Agent

The SNMP Agent is a software that resides in the managed devices in the network, and collects data from these devices. Each device hosts an SNMP Agent. The SNMP Agent stores the data, and sends the data when requested by an SNMP Manager. In addition, the SNMP Agent can asynchronously alert the SNMP Manager about events by using special PDUs called traps.

Management information base

SNMP Agents in the managed devices store the data about these devices in a database called the management information base (MIB). The MIB is a hierarchical database, which is structured on the standard specified in RFC 2578 (Structure of Management Information Version 2 [SMIv2]).

The MIB is a database of objects that can be used by a network management system to manage and monitor devices on the network. The MIB can be retrieved by a network management system that uses SNMP. The MIB structure determines the scope of management access allowed by a device. By using SNMP, a manager application can issue read or write operations within the scope of the MIB.

Port Information

The following table provides information on ports that the device uses. When configuring the switch for various policies, take into consideration firewalls and other devices that may sit between device and your network or between the managers and the device.

TABLE 1 Port Information

Port	Type	Common use	Comment

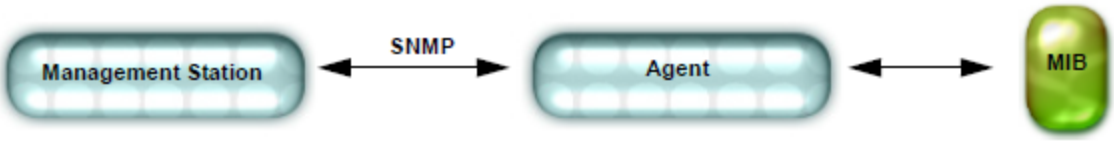
TABLE 1 Port Information (continued)

161	UDP	SNMP GET/SET/GETNEXT/ BULK	Disable the SNMP service on the remote host if you do not use it, or filter incoming UDP packets going to this port.
162	UDP	SNMP TRAPS/INFORMS	Sends traps/informs. Uses CLI command "no snmp-server enable trap" to disable the SNMP trap service. For outgoing source port, the available port number is picked in the port range.

Basic SNMP operation

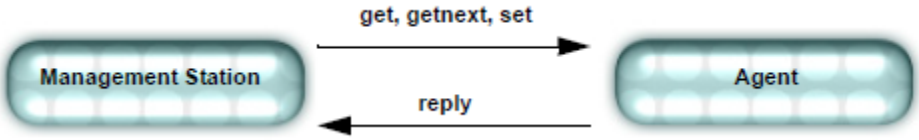
Every Extreme device carries an agent and management information base (MIB). The agent accesses information about a device and makes it available to an SNMP network management station.

FIGURE 1 SNMP structure



When active, the management station can "get" information or "set" information when it queries an agent. SNMP commands, such as get, set, getnext, and getbulk, are sent from the management station, and the agent replies immediately and send traps/notifications on any asynchronous events on the device. Agents use variables to report such data as the number of bytes and packets in and out of the device, or the number of broadcast messages sent and received. These variables are also known as managed objects. All managed objects are contained in the MIB.

FIGURE 2 SNMP query



The management station can also receive traps, unsolicited messages from the switch agent, if an unusual event occurs.

FIGURE 3 SNMP trap

The agent can receive queries from one or more management stations and can send traps to up to six management stations.

Understanding MIBs

The management information base (MIB) is a database of monitored and managed information on an Extreme device. The MIB structure can be represented by a tree hierarchy. The root splits into three main branches: International Organization for Standardization (ISO), Consultative Committee for International Telegraph and Telephone (CCITT), and joint ISO/CCITT. These branches have short text strings and integers (OIDs) to identify them. Text strings describe object names, while integers allow software to create compact, encoded representations of the names.

Extreme MIB structure

Each MIB variable is assigned an object identifier (OID). The OID is the sequence of numeric labels on the nodes along a path from the root to the object. For example, as shown in the following figure, the sysDescr is:

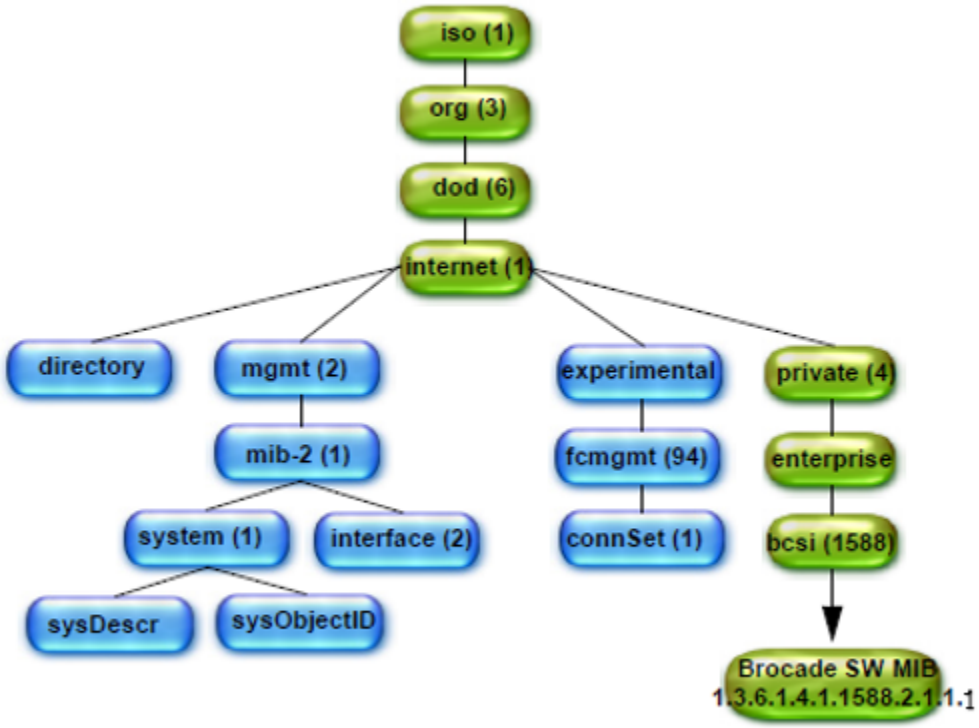
```
1.3.6.1.2.1.1.1
```

The corresponding name is:

```
iso.org.dod.internet.mgmt.mib-2.system.sysDescr
```

The other branches are part of the standard MIBs, and the portions relevant to configuring SNMP on an Extreme device are referenced in the remainder of this chapter.

FIGURE 4 Extreme MIB tree



Access to MIB variables

You can use a MIB browser to access the MIB variables. All MIB browsers load MIBs and perform queries.

Once loaded, MAX-ACCESS provides access levels between the agent and management station. The access levels are described in the following table.

TABLE 2 MIB access levels

Access level	Description
Not accessible/None	You cannot read or write to this variable.
Read-create	Specifies a tabular object that can be read, modified, or created as a new row in a table.
Read-only	You can only monitor information.
Read-write	You can read or modify this variable.
Accessible-to-notify	You can read this information only through traps.

Extreme MIBs

The Extreme MIB is a set of variables that are private extensions to the Internet standard MIBs. The Extreme agents support many Internet-standard MIBs. These standard MIBs are defined in RFC publications. To find specific MIB information, examine the Extreme proprietary MIB structure and the standard RFC MIBs supported by Extreme.

Extreme MIB files

The Extreme MIB files are as follows:

- APO-CAPABILITIES-MIB.mib
- APO-CONSORTIUM-MIB.mib
- APO-TARGET-PARAMS-MIB.mib
- BRCD_TC.mib
- BROCADE-CONTEXT-MAPPING-MIB.mib
- BROCADE-IEEE8021-PAE-CAPABILITY-MIB.mib
- BROCADE-IEEE8023-LAG-CAPABILITY-MIB.mib
- BROCADE-LLDP-CAPABILITY-MIB.mib
- BROCADE-LLDP-EXT-DOT3-CAPABILITY-MIB.mib
- BROCADE-OPTICAL-MONITORING-MIB.mib
- BROCADE-PRODUCTS-MIB.mib
- BROCADE-REG-MIB.mib
- BROCADE-UDLD-MIB.mib
- HA.mib
- SNMP-RESEARCH-MIB.mib
- SWBase.mib
- System.mib
- USM-TARGET-TAG-MIB.mib

Obtaining the Extreme MIBs

You can download the Extreme-specific MIB files required for this release from the downloads area of Extreme.com. To download the Extreme-specific MIBs from Extreme.com, you must have a user name and password.

1. From your web browser, go to http://my.extreme.com.
2. Log in with your username and password.
3. Click the downloads tab.
4. On the downloads tab, under Product Downloads, select All Operating Systems from the Download by list.
5. Select SLX Operating System (SLX OS), and then navigate to the release.
6. Navigate to the link for the MIBs package and either open the file or save it to disk.

Agent Capability MIBs

In SNMP, capability MIBs provide the implementation details for the associated MIBs. These MIBs, called AGENT-CAPABILITY MIBs, list supported conformance groups and any deviations from the MIBs as implemented in the associated software version. The following table lists the Extreme supported capability MIBs.

TABLE 3 Agent Capability MIBs

Capability MIBs	Description
BROCADE-IEEE8021-PAE-CAPABILITY-MIB	Provides the implementation details for the IEEE8021-PAE-MIB
BROCADE-IEEE8023-LAG-CAPABILITY-MIB	Provides the implementation details for the IEEE8023-LAG-MIB
BROCADE-LLDP-CAPABILITY-MIB	Provides the implementation details for the LLDP-MIB
BROCADE-LLDP-EXT-DOT3-CAPABILITY-MIB	Provides the implementation details for the LLDP-EXT-DOT3-MIB

Standard MIBs

Standard MIBs are distributed through Extreme by shipping a concatenated file for Standard MIBs and Enterprise MIBs. You can also download the following MIBs from http://www.oidview.com or http://www.ietf.org:

- BFD-MIB
- BGP4-MIB
- BRIDGE-MIB
- ENTITY-MIB
- HOST-RESOURCE-MIB
- IANA-ADDRESS-FAMILY-NUMBERS-MIB
- IANA-RTPROTO-MIB
- IANAifType-MIB
- LLDP-MIB
- LLDP-EXT-DOT3-MIB
- LLDP-EXT-DOT1-MIB
- OSPF-MIB
- PAE-MIB
- P-BRIDGE-MIB
- Q-BRIDGE-MIB
- RFC 2856: HCNUM-TC MIB
- RFC 2863: The Interfaces Group MIB
- RFC 3289: Management Information Base for the Differentiated Services Architecture
- RFC 3593: PerfHist-TC-MIB
- RFC 3705: HC-PerfHist-TC-MIB
- RFC 4001: INET-ADDRESS-MIB
- RFC 4292: IP Forwarding Table MIB
- RFC 4293: Management Information Base for the Internet Protocol (IP)
- RMON-MIB
- RSTP-MIB
- SFLOW-MIB
- SNMP-FRAMEWORK-MIB
- SNMPv2-MIB
- SNMPv2-TC
- SNMPv3-MIB
- SNMP-MPD-MIB
- SNMP-TARGET-MIB
- SNMP-NOTIFICATION-MIB
- SNMP-USER-BASED-SM-MIB

- SNMP-VIEW-BASED-ACM-MIB
- SNMP-COMMUNITY-MIB
- TCP-MIB
- UDP-MIB

MIB loading order

Many MIBs use definitions that are defined in other MIBs. These definitions are listed in the IMPORTS section near the top of the MIB. When loading the Extreme MIBs, refer to the following table to ensure that any MIB dependencies are loading in the correct order. You can also go through the files in the . . . /mibs_loading/loading_order/ folder, which is obtained after the downoaded MIBs package file is unzipped.

> **NOTE**
> Before loading the Extreme MIB files, ensure that you have the correct version of SNMP for the SLX-OS. All versions of SLX-OS support SNMPv1, SNMPv2c, and SNMPv3. SNMPv2c informs are not supported.

TABLE 4 Extreme SNMP MIB dependencies

MIB Name	Dependencies
Brocade-REG.mib	RFC1155-SMI
Brocade-TC.mib	Brocade-REG-MIB SNMPv2-TC SNMPv2-SMI
BROCADE-PRODUCTS-MIB.mib	SNMPv2-SMI Brocade-REG-MIB
BROCADE-CONTEXT-MAPPING -MIB.mib	SNMPv2-SMI SNMPv2-CONF SNMP-FRAMEWORK-MIB SNMPv2-TC Brocade-REG-MIB
HA.mib	SNMPv2-SMI Brocade-REG-MIB SW-MIB ENTITY-MIB SNMPv2-TC
SWBase.mib	SNMPv2-TC SNMPv2-SMI Brocade-REG-MIB
System.mib	SNMPv2-TC Brocade-TC SWBASE-MIB
BROCADE-OPTICAL-MONITORING-MIB.mib	SNMPv2-SMI SNMPv2-CONF SNMPv2-TC SNMP-FRAMEWORK-MIB IF-MIB Brocade-REG-MIB

Supported Standard MIB Objects

BFD MIB

The BFD MIB defines objects that help in modeling the Bidirectional Forwarding Detection protocol.

Supported object groups

Object group name	OID	Supported
bfdSessTable	1.3.6.1.2.1.222.1.2	Yes (read-only)
bfdSessPerfTable	1.3.6.1.2.1.222.1.3	Yes
bfdSessDiscMapTable	1.3.6.1.2.1.222.1.4	Yes
bfdSessIpMapTable	1.3.6.1.2.1.222.1.5	No
bfdAdminStatus	1.3.6.1.2.1.222.1.1.1	Yes (read-only)
bfdOperStatus	1.3.6.1.2.1.222.1.1.2	Yes
bfdNotificationsEnable	1.3.6.1.2.1.222.1.1.3	Yes (read-only)
bfdSessIndexNext	1.3.6.1.2.1.222.1.1.4	No

NOTE
BFD MIB does not support SNMP SET request.

TABLE 5 bfdSessTable

Object group name	OID
bfdSessIndex	1.3.6.1.2.1.222.1.2.1.1
bfdSessVersionNumber	1.3.6.1.2.1.222.1.2.1.2
bfdSessType	1.3.6.1.2.1.222.1.2.1.3
bfdSessDiscriminator	1.3.6.1.2.1.222.1.2.1.4
bfdSessRemoteDiscr	1.3.6.1.2.1.222.1.2.1.5
bfdSessDestinationUdpPort	1.3.6.1.2.1.222.1.2.1.6
bfdSessSourceUdpPort	1.3.6.1.2.1.222.1.2.1.7
bfdSessEchoSourceUdpPort	1.3.6.1.2.1.222.1.2.1.8
bfdSessAdminStatus	1.3.6.1.2.1.222.1.2.1.9
bfdSessOperStatus	1.3.6.1.2.1.222.1.2.1.10
bfdSessState	1.3.6.1.2.1.222.1.2.1.11
bfdSessRemoteHeardFlag	1.3.6.1.2.1.222.1.2.1.12
bfdSessDiag	1.3.6.1.2.1.222.1.2.1.13
bfdSessOperMode	1.3.6.1.2.1.222.1.2.1.14
bfdSessDemandModeDesiredFlag	1.3.6.1.2.1.222.1.2.1.15
bfdSessControlPlaneIndepFlag	1.3.6.1.2.1.222.1.2.1.16
bfdSessMultipointFlag	1.3.6.1.2.1.222.1.2.1.17
bfdSessInterface	1.3.6.1.2.1.222.1.2.1.18
bfdSessSrcAddrType	1.3.6.1.2.1.222.1.2.1.19
bfdSessSrcAddr	1.3.6.1.2.1.222.1.2.1.20
bfdSessDstAddrType	1.3.6.1.2.1.222.1.2.1.21
bfdSessDstAddr	1.3.6.1.2.1.222.1.2.1.22
bfdSessGTSM	1.3.6.1.2.1.222.1.2.1.23

TABLE 5 bfdSessTable (continued)

Object group name	OID
bfdSessGTSMTTL	1.3.6.1.2.1.222.1.2.1.24
bfdSessDesiredMinTxIntervalrt	1.3.6.1.2.1.222.1.2.1.25
bfdSessReqMinRxInterval	1.3.6.1.2.1.222.1.2.1.26
bfdSessReqMinEchoRxInterval	1.3.6.1.2.1.222.1.2.1.27
bfdSessDetectMult	1.3.6.1.2.1.222.1.2.1.28
bfdSessNegotiatedInterval	1.3.6.1.2.1.222.1.2.1.29
bfdSessNegotiatedEchoInterval	1.3.6.1.2.1.222.1.2.1.30
bfdSessNegotiatedDetectMult	1.3.6.1.2.1.222.1.2.1.31
bfdSessAuthPresFlag	1.3.6.1.2.1.222.1.2.1.32
bfdSessAuthenticationType	1.3.6.1.2.1.222.1.2.1.33
bfdSessAuthenticationKeyID	1.3.6.1.2.1.222.1.2.1.34
bfdSessAuthenticationKey	1.3.6.1.2.1.222.1.2.1.35
bfdSessStorageType	1.3.6.1.2.1.222.1.2.1.36
bfdSessRowStatus	1.3.6.1.2.1.222.1.2.1.37

TABLE 6 bfdSessPerfTable

Object group name	OID
bfdSessPerfCtrlPktIn	1.3.6.1.2.1.222.1.3.1.1
bfdSessPerfCtrlPktOut	1.3.6.1.2.1.222.1.3.1.2
bfdSessPerfCtrlPktDrop	1.3.6.1.2.1.222.1.3.1.3
bfdSessPerfCtrlPktDropLastTime	1.3.6.1.2.1.222.1.3.1.4
bfdSessPerfEchoPktIn	1.3.6.1.2.1.222.1.3.1.5
bfdSessPerfEchoPktOut	1.3.6.1.2.1.222.1.3.1.6
bfdSessPerfEchoPktDrop	1.3.6.1.2.1.222.1.3.1.7
bfdSessPerfEchoPktDropLastTime	1.3.6.1.2.1.222.1.3.1.8
bfdSessUpTime	1.3.6.1.2.1.222.1.3.1.9
bfdSessPerfLastSessDownTime	1.3.6.1.2.1.222.1.3.1.10
bfdSessPerfLastCommLostDiag	1.3.6.1.2.1.222.1.3.1.11
bfdSessPerfSessUpCount	1.3.6.1.2.1.222.1.3.1.12
bfdSessPerfDiscTime	1.3.6.1.2.1.222.1.3.1.13
bfdSessPerfCtrlPktInHC	1.3.6.1.2.1.222.1.3.1.14
bfdSessPerfCtrlPktOutHC	1.3.6.1.2.1.222.1.3.1.15
bfdSessPerfCtrlPktDropHC	1.3.6.1.2.1.222.1.3.1.16
bfdSessPerfEchoPktInHC	1.3.6.1.2.1.222.1.3.1.17
bfdSessPerfEchoPktOutHC	1.3.6.1.2.1.222.1.3.1.18
bfdSessPerfEchoPktDropHC	1.3.6.1.2.1.222.1.3.1.19

TABLE 7 bfdSessDiscMapTable

Object group name	OID
bfdSessDiscriminator	1.3.6.1.2.1.222.1.2.1.4
bfdSessDiscMapIndex	1.3.6.1.2.1.222.1.4.1.1

TABLE 8 BFD notifications

Object group name	OID
bfdSessUp	1.3.6.1.2.1.222.0.1
bfdSessDown	1.3.6.1.2.1.222.0.2

History

Release version	History
17s.1.00	This MIB was introduced.

BGP4 MIB

The MIB module for the BGP-4 protocol. The BGP4 MIB module defines the MIB objects for management of Border Gateway Protocol Version 4 (BGPv4). Both read-only and read-write operations are supported on this MIB through SNMP.

Supported object groups

Object group name	OID	Supported?
bgpVersion	1.3.6.1.2.1.15.1	Yes
bgpLocalAs	1.3.6.1.2.1.15.2	Yes
bgpPeerEntry	1.3.6.1.2.1.15.3	Yes
bgpPeerIdentifier	1.3.6.1.2.1.15.4	Yes
bgpRcvdPathAttrTable	1.3.6.1.2.1.15.5	Yes
bgp4PathAttrTable	1.3.6.1.2.1.15.6	Yes
bgpMIBConformance	1.3.6.1.2.1.15.8	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

Bridge MIB

The Bridge MIB module for managing devices that support IEEE 802.1D.

The Bridge-Identifier, as used in the Spanning Tree Protocol, to uniquely identify a bridge. Its first two octets (in network byte order) contain a priority value, and its last 6 octets contain the MAC address used to refer to a bridge in a unique fashion (typically, the numerically smallest MAC address of all ports on the bridge.

Supported object groups

Object group name	OID	Supported?
dot1dBase	1.3.6.1.2.1.17.1	Yes
dot1dStp	1.3.6.1.2.1.17.2	Yes
dot1dTp	1.3.6.1.2.1.17.4	Yes
dot1dStatic	1.3.6.1.2.1.17.5	Yes

NOTE

The dot1dTpFdbTable (OID 1.3.6.1.2.1.17.4.4) in RFC 1493 is used to find dynamically learned MAC addresses. Statically configured MAC addresses are in the snFdbTable

NOTE

The SNMP MIB object dot1dStpPortTable (OID 1.3.6.1.2.1.17.2.15) does not display information for tagged ports that belong to an 802.1W RSTP configuration. The design of that MIB table is based on a Single STP standard, and does not accommodate Multiple STPs. Thus, the table displays information only for SSTP and for tagged and untagged ports.

NOTE

RFC 4188 has been converted to SMIv2 format. The object dot1dStpPortPathCost32 was added to support IEEE 802. The existing MIB dot1dStpPortPathCost has an upper range of 65535. Over that value, this MIB stays at the upper value and you should access dot1dStpPortPathCost32, which has a higher upper-range value.

History

Release version	History
17s.1.00	This MIB was introduced.

CFM MIB

Connectivity Fault Management module for managing IEEE 802.1ag.

Supported object groups

Object group name	OID	Supported?
dot1agNotifications	1.3.111.2.802.1.1.8.0	Yes
dot1agMIBObjects	1.3.111.2.802.1.1.8.1	Yes
dot1agCfmConformance	1.3.111.2.802.1.1.8.2	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

Entity MIB (Version 3)

The following objects from RFC 4133 Entity MIBs are the module for representing multiple physical and logical entities supported by a single SNMP agent. Only read-only operation is supported on this MIB through SNMP.

Supported object groups

Objects	OID	Supported
entityPhysical	1.3.6.1.2.1.47.1.1	Yes
entPhysicalTable	1.3.6.1.2.1.47.1.1.1	Yes
entPhysicalEntry	1.3.6.1.2.1.47.1.1.1.1	Yes
entPhysicalIndex	1.3.6.1.2.1.47.1.1.1.1.1	Yes
entPhysicalDescr	1.3.6.1.2.1.47.1.1.1.1.2	Yes
entPhysicalVendorType	1.3.6.1.2.1.47.1.1.1.1.3	Yes
entPhysicalContainedIn	1.3.6.1.2.1.47.1.1.1.1.4	Yes
entPhysicalClass	1.3.6.1.2.1.47.1.1.1.1.5	Yes
entPhysicalParentRelPos	1.3.6.1.2.1.47.1.1.1.1.6	Yes
entPhysicalName	1.3.6.1.2.1.47.1.1.1.1.7	Yes
entPhysicalHardwareRev	1.3.6.1.2.1.47.1.1.1.1.8	Yes
entPhysicalFirmwareRev	1.3.6.1.2.1.47.1.1.1.1.9	Yes
entPhysicalSoftwareRev	1.3.6.1.2.1.47.1.1.1.1.10	Yes
entPhysicalSerialNum	1.3.6.1.2.1.47.1.1.1.1.11	Yes
entPhysicalMfgName	1.3.6.1.2.1.47.1.1.1.1.12	Yes
entPhysicalModelName	1.3.6.1.2.1.47.1.1.1.1.13	Yes
entPhysicalAlias	1.3.6.1.2.1.47.1.1.1.1.14	Yes
entPhysicalAssetID	1.3.6.1.2.1.47.1.1.1.1.15	Yes
entPhysicalIsFRU	1.3.6.1.2.1.47.1.1.1.1.16	Yes
entPhysicalMfgDate	1.3.6.1.2.1.47.1.1.1.1.17	Yes
entPhysicalUris	1.3.6.1.2.1.47.1.1.1.1.18	Yes
entPhysicalContainsTable	1.3.6.1.2.1.47.1.3.3	Yes
entLastChangeTime	1.3.6.1.2.1.47.1.4.1	Yes
entConfigChange	1.3.6.1.2.1.47.2.0.1	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

Host Resource MIB

The Host Resource MIB module defines a uniform set of MIB objects useful for the management of host computers. Only read-only operation is supported on this MIB through SNMP.

Supported object groups

Object group name	OID	Supported?
hrSystem	1.3.6.1.2.1.25.1	Yes
hrStorage	1.3.6.1.2.1.25.2	Yes
hrDevice	1.3.6.1.2.1.25.3	Yes
hrSWRun	1.3.6.1.2.1.25.4	Yes
hrSWRunPerf	1.3.6.1.2.1.25.5	Yes
hrSWInstalled	1.3.6.1.2.1.25.6	Yes
hrMIBAdminInfo	1.3.6.1.2.1.25.7	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

IANA-ADDRESS-FAMILY-NUMBERS-MIB

The ianaAddressFamilyNumbers MIB module defines the AddressFamilyNumbers textual convention.

ianaAddressFamilyNumbers textual convention

Name	Description
AddressFamilyNumbers Syntax: Integer	The definition of this textual convention with the addition of newly assigned values is published periodically by the IANA, in either the Assigned Numbers RFC, or some derivative of it specific to Internet Network Management number assignments. (The latest arrangements can be obtained by contacting the IANA.)

History

Release version	History
17s.1.00	This MIB was introduced.

IANAifType-MIB

The ianaifType MIB module defines the IANAifType textual convention, and thus the enumerated values of the ifType object defined in MIB-II's ifTable.

ianaifType textual convention

Name	Description
IANAifType Syntax: Integer	This data type is used as the syntax of the ifType object in the (updated) definition of MIB-II's ifTable. The definition of this textual convention with the addition of newly assigned values is published periodically by the IANA, in either the Assigned Numbers RFC, or some derivative of it specific to Internet Network Management number assignments. (The latest arrangements can be obtained by contacting the IANA.)
IANAtunnelType Syntax: Integer	The encapsulation method used by a tunnel.

History

Release version	History
17s.1.00	This MIB was introduced.

IANA-RTPROTO-MIB

The ianaRtProtoMIB module defines the IANAipRouteProtocol and IANAipMRouteProtocol textual conventions for use in MIBs which need to identify unicast or multicast routing mechanisms. Any additions or changes to the contents of this MIB module require either publication of an RFC, or Designated Expert Review as defined in RFC 2434, Guidelines for Writing an IANA Considerations Section in RFCs. The Designated Expert will be selected by the IESG Area Director(s) of the Routing Area.

ianaRtProtoMIB textual convention

Name	Description
IANAipRouteProtocol Syntax: Integer	A mechanism for learning routes. Inclusion of values for routing protocols is not intended to imply that those protocols need be supported.
IANAipMRouteProtocol Syntax: Integer	The multicast routing protocol. Inclusion of values for multicast routing protocols is not intended to imply that those protocols need be supported.

History

Release version	History
17s.1.00	This MIB was introduced.

Interface group MIB

The interface entry table is based on the RFC 2863 and it obsoletes RFC 2233. It contains information about the interfaces. Each sub-layer is considered to be an interface.

For ifTable and ifXTable, the SNMP counters do not clear when the clear statistics CLI command is issued. The counters are cleared only when the device is reloaded. The cumulative counter is not affected by the clear command.

TABLE 9 ifMIB group

Object group name	Object Identifier
ifMIB	1.3.6.1.2.1.31
ifMIBObjects	1.3.6.1.2.1.31.1
ifXTable	1.3.6.1.2.1.31.1.1
ifXEntry	1.3.6.1.2.1.31.1.1.1
ifName	1.3.6.1.2.1.31.1.1.1.1
ifInMulticastPkts	1.3.6.1.2.1.31.1.1.1.2
ifInBroadcastPkts	1.3.6.1.2.1.31.1.1.1.3
ifOutMulticastPkts	1.3.6.1.2.1.31.1.1.1.4
ifOutBroadcastPkts	1.3.6.1.2.1.31.1.1.1.5
ifHCInOctets	1.3.6.1.2.1.31.1.1.1.6
ifHCInUcastPkts	1.3.6.1.2.1.31.1.1.1.7
ifHCInMulticastPkts	1.3.6.1.2.1.31.1.1.1.8
ifHCInBroadcastPkts	1.3.6.1.2.1.31.1.1.1.9
ifHCOutOctets	1.3.6.1.2.1.31.1.1.1.10
ifHCOutUcastPkts	1.3.6.1.2.1.31.1.1.1.11
ifHCOutMulticastPkts	1.3.6.1.2.1.31.1.1.1.12
ifHCOutBroadcastPkts	1.3.6.1.2.1.31.1.1.1.13
ifLinkUpDownTrapEnable	1.3.6.1.2.1.31.1.1.1.14
ifHighSpeed	1.3.6.1.2.1.31.1.1.1.15
ifPromiscuousMode	1.3.6.1.2.1.31.1.1.1.16
ifConnectorPresent	1.3.6.1.2.1.31.1.1.1.17
ifAlias	1.3.6.1.2.1.31.1.1.1.18

TABLE 10 iInterface group

Object group name	Object Identifier
ifNumber	1.3.6.1.2.1.2.1
ifTable	1.3.6.1.2.1.2.2
ifEntry	1.3.6.1.2.1.2.2.1
ifIndex	1.3.6.1.2.1.2.2.1.1
ifDescr	1.3.6.1.2.1.2.2.1.2
ifType	1.3.6.1.2.1.2.2.1.3
ifMtu	1.3.6.1.2.1.2.2.1.4
ifSpeed	1.3.6.1.2.1.2.2.1.5
ifPhysAddress	1.3.6.1.2.1.2.2.1.6

TABLE 10 iInterface group (continued)

Object group name	Object Identifier
ifAdminStatus	1.3.6.1.2.1.2.2.1.7
ifOperStatus	1.3.6.1.2.1.2.2.1.8
ifLastChange	1.3.6.1.2.1.2.2.1.9
ifInOctets	1.3.6.1.2.1.2.2.1.10
ifInUcastPkts	1.3.6.1.2.1.2.2.1.11
ifInNUcastPkts	1.3.6.1.2.1.2.2.1.12
ifInDiscards	1.3.6.1.2.1.2.2.1.13
ifInErrors	1.3.6.1.2.1.2.2.1.14
ifInUnknownProtos	1.3.6.1.2.1.2.2.1.15
ifOutOctets	1.3.6.1.2.1.2.2.1.16
ifOutUcastPkts	1.3.6.1.2.1.2.2.1.17
ifOutNUcastPkts	1.3.6.1.2.1.2.2.1.18
ifOutDiscards	1.3.6.1.2.1.2.2.1.19
ifOutErrors	1.3.6.1.2.1.2.2.1.20
ifOutQLen	1.3.6.1.2.1.2.2.1.21
ifSpecific	1.3.6.1.2.1.2.2.1.22

History

Release version	History
17s.1.00	This MIB was introduced.

IP-MIB

The IP-MIB module provides MIB objects for management of IP modules in an IP version-independent manner.

NOTE
Beginning with 17s.1.00 release, SNMP GET and SNMP SET operations are supported on the IP-MIB.

Object group name	Object Identifier	Supported?
ipForwarding	1.3.6.1.2.1.4.1	Yes (Read-only)
ipDefaultTTL	1.3.6.1.2.1.4.2	Yes (Read-only)
ipReasmTimeout	1.3.6.1.2.1.4.13	Yes
ipForward	1.3.6.1.2.1.4.24	Yes (Read-only)
ipAddressTable	1.3.6.1.2.1.4.34	Yes (Read-only)
ipNetToPhysicalTable	1.3.6.1.2.1.4.35	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

IP Forward MIB

The IP Forward MIB module defines MIB objects for the management of Classless Inter-domain Routing (CIDR) multipath IP routes.

NOTE
Beginning with 17s.1.00 release, SNMP GET and SNMP SET operations are supported on the IP Forward MIB.

Object group name	Object Identifier	Supported?
inetCidrRouteNumber	1.3.6.1.2.1.4.24.6	Yes
inetCidrRouteTable	1.3.6.1.2.1.4.24.7	Yes
inetCidrRouteDiscards	1.3.6.1.2.1.4.24.8	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

LAG MIB

The Link Aggregation module for managing IEEE 802.3ad.

Supported object groups

NOTE

An Extreme device provides only read-only support to the following object groups listed here.

Object group name	OID
dot3adAggIndex	1.2.840.10006.300.43.1.1.1.1.1
dot3adAggMACAddress	1.2.840.10006.300.43.1.1.1.1.2
dot3adAggActorSystemPriority	1.2.840.10006.300.43.1.1.1.1.3
dot3adAggActorSystemID	1.2.840.10006.300.43.1.1.1.1.4
dot3adAggAggregateOrIndividual	1.2.840.10006.300.43.1.1.1.1.5
dot3adAggActorAdminKey	1.2.840.10006.300.43.1.1.1.1.6
dot3adAggActorOperKey	1.2.840.10006.300.43.1.1.1.1.7
dot3adAggPartnerSystemID	1.2.840.10006.300.43.1.1.1.1.8
dot3adAggPartnerSystemPriority	1.2.840.10006.300.43.1.1.1.1.9
dot3adAggPartnerOperKey	1.2.840.10006.300.43.1.1.1.1.10
dot3adAggCollectorMaxDelay	1.2.840.10006.300.43.1.1.1.1.11

History

Release version	History
17s.1.00	This MIB was introduced.

LLDP MIB

The MIB module for LLDP configuration, statistics, local system data and remote systems data components.

Supported object groups

Object group name	OID	Supported?
lldpConfiguration	1.0.8802.1.1.2.1.1	Yes
lldpStatistics	1.0.8802.1.1.2.1.2	Yes
lldpLocalSystemData	1.0.8802.1.1.2.1.3	Yes
lldpRemoteSystemsData	1.0.8802.1.1.2.1.4	Yes
lldpExtensions	1.0.8802.1.1.2.1.5	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

LLDP-EXT-DOT1 MIB

The LLDP MIB extension module for IEEE 802.1 organizationally defined discovery information.

Supported object groups

Object group name	OID	Supported?
lldpXdot1Config	1.0.8802.1.1.2.1.5.32962.1.1	Yes
lldpXdot1LocalData	1.0.8802.1.1.2.1.5.32962.1.2	Yes
lldpXdot1RemoteData	1.0.8802.1.1.2.1.5.32962.1.3	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

LLDP-EXT-DOT3 MIB

The LLDP MIB extension module for IEEE 802.3 organizationally defined discovery information.

Supported object groups

Object group name	OID	Supported?
lldpXdot3Config	1.0.8802.1.1.2.1.5.4623.1.1	Yes
lldpXdot3LocalData	1.0.8802.1.1.2.1.5.4623.1.2	Yes
lldpXdot3RemoteData	1.0.8802.1.1.2.1.5.4623.1.3	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

OSPF MIB

The OSPF MIB module defines the MIB objects for management of the Open Shortest Path First version 2 (OSPFv2) protocol. Both read-only and read-write operations are supported on this MIB through SNMP.

Supported object groups

Objects group name	OID	Supported?
ospfGeneralGroup	1.3.6.1.2.1.14.1	Yes
ospfAreaTable	1.3.6.1.2.1.14.2	Yes
ospfStubAreaTable	1.3.6.1.2.1.14.3	Yes
ospfLsdbTable	1.3.6.1.2.1.14.4	Yes
ospfAreaRangeTable	1.3.6.1.2.1.14.5	Yes
ospfHostTable	1.3.6.1.2.1.14.6	Yes
ospfIfTable	1.3.6.1.2.1.14.7	Yes
ospfIfMetricTable	1.3.6.1.2.1.14.8	Yes
ospfVirtIfTable	1.3.6.1.2.1.14.9	Yes
ospfNbrTable	1.3.6.1.2.1.14.10	Yes
ospfVirtNbrTable	1.3.6.1.2.1.14.11	Yes
ospfExtLsdbTable	1.3.6.1.2.1.14.12	Yes
ospfRouteGroup	1.3.6.1.2.1.14.13	Yes
ospfAreaAggregateTable	1.3.6.1.2.1.14.14	Yes
ospfConformance	1.3.6.1.2.1.14.15	Yes
ospfTrap	1.3.6.1.2.1.14.16	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

P-Bridge MIB

The P-Bridge MIB Extension module for managing Priority and Multicast Filtering, defined by IEEE 802.1D-1998, including Restricted Group Registration defined by IEEE 802.1t-2001.

Supported object groups

Object group name	OID	Supported?
dot1dBase	1.3.6.1.2.1.17.1	Yes
dot1dExtBase	1.3.6.1.2.1.17.6.1.1	Yes
dot1dPortPriority	1.3.6.1.2.1.17.6.1.2	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

PAE MIB

The Port Access Entity module for managing IEEE 802.1X.

Supported object groups

Objects group name	OID	Supported
dot1xPaePortTable	1.0.8802.1.1.1.1.1.2	Yes
dot1xAuthConfigTable	1.0.8802.1.1.1.1.2.1	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

Q-Bridge MIB

The VLAN Bridge MIB module manages Virtual Bridged Local Area Networks, as defined by IEEE 802.1Q-2003, including Restricted VLAN Registration defined by IEEE 802.1u-2001 and VLAN Classification defined by IEEE 802.1v-2001.

Supported object groups

Object group name	OID	Supported?
dot1qBase	1.3.6.1.2.1.17.7.1.1	Yes
dot1qTp	1.3.6.1.2.1.17.7.1.2	Yes
dot1qStatic	1.3.6.1.2.1.17.7.1.3	Yes
dot1qVlan	1.3.6.1.2.1.17.7.1.4	Yes
dot1vProtocol	1.3.6.1.2.1.17.7.1.5	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

RIPv2-MIB

The MIB module to describe the RIP2 Version 2 Protocol.

Supported object groups

Objects group name	OID	Supported?
rip2Globals	1.3.6.1.2.1.23.1	Yes
rip2IfStatTable	1.3.6.1.2.1.23.2	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

RMON-MIB

Remote network monitoring devices, often called monitors or probes, are instruments that exist for the purpose of managing a network. This MIB defines objects for managing remote network monitoring devices.

Supported object groups

Object group name	OID	Supported?
rmon	1.3.6.1.2.1.16	Yes
statistics	1.3.6.1.2.1.16.1	Yes
history	1.3.6.1.2.1.16.2	Yes
alarm	1.3.6.1.2.1.16.3	Yes
event	1.3.6.1.2.1.16.9	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

RSTP MIB

The Bridge MIB Extension module for managing devices that support the Rapid Spanning Tree Protocol (RSTP) defined by IEEE 802.1w.

Supported object groups

Objects group name	OID	Supported?
dot1dStpVersion	1.3.6.1.2.1.17.2.16	Yes
dot1dStpTxHoldCount	1.3.6.1.2.1.17.2.17	Yes
dot1dStpExtPortTable	1.3.6.1.2.1.17.2.19	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

SFLOW MIB (Version 5)

The sFlowMIB module manages the generation and transportation of sFlow data records.

Supported object groups

Objects group name	OID	Supported?
sFlowVersion	1.3.6.1.4.1.14706.1.1.1	Yes
sFlowAgentAddressType	1.3.6.1.4.1.14706.1.1.2	Yes
sFlowAgentAddress	1.3.6.1.4.1.14706.1.1.3	Yes
sFlowRcvrTable	1.3.6.1.4.1.14706.1.1.4	Yes
sFlowFsTable	1.3.6.1.4.1.14706.1.1.5	Yes
sFlowCpTable	1.3.6.1.4.1.14706.1.1.6	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

SNMP-COMMUNITY-MIB

Usage Guidelines

The following table lists the SNMP-Community table MIBs supported on the Extreme SLX devices.

NOTE

Use snmp-server enable mib snmp-community-mib to enable SNMP community MIBs.

Supported object groups

Object group name	OID	Supported?
snmpCommunityIndex	1.3.6.1.6.3.18.1.1.1.1	Yes
snmpCommunityName	1.3.6.1.6.3.18.1.1.1.2	Yes
snmpCommunitySecurityName	1.3.6.1.6.3.18.1.1.1.3	Yes
snmpCommunityContextEngineID	1.3.6.1.6.3.18.1.1.1.4	Yes
snmpCommunityContextName	1.3.6.1.6.3.18.1.1.1.5	Yes
snmpCommunityTransportTag	1.3.6.1.6.3.18.1.1.1.6	Yes
snmpCommunityStorageType	1.3.6.1.6.3.18.1.1.1.7	Yes
snmpCommunityStatus	1.3.6.1.6.3.18.1.1.1.8	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

SNMP-FRAMEWORK MIB

The SNMP Management Architecture MIB.

Supported object group

Object group name	OID	Supported?
snmpFrameworkAdmin	1.3.6.1.6.3.10.1	Yes
snmpFrameworkMIBObjects	1.3.6.1.6.3.10.2	Yes
snmpFrameworkMIBConformance	1.3.6.1.6.3.10.3	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

SNMPv2 MIB

The MIB module for SNMP entities.

Supported object groups

Object group name	OID	Supported?
sysDescr	1.3.6.1.2.1.1.1	Yes
sysObjectID	1.3.6.1.2.1.1.2	Yes
sysUpTime	1.3.6.1.2.1.1.3	Yes
sysContact	1.3.6.1.2.1.1.4	Yes
sysName	1.3.6.1.2.1.1.5	Yes
sysLocation	1.3.6.1.2.1.1.6	Yes
sysServices	1.3.6.1.2.1.1.7	Yes
sysORLastChange	1.3.6.1.2.1.1.8	Yes
sysORTable	1.3.6.1.2.1.1.9	Yes
sysORIndex	1.3.6.1.2.1.1.9.11	Yes
sysORID	1.3.6.1.2.1.1.9.12	Yes
sysORDescr	1.3.6.1.2.1.1.9.13	Yes
sysORUpTime	1.3.6.1.2.1.1.9.14	Yes

NOTE

The SNMPv2 MIB supports the SNMP message counters as well.

History

Release version	History
17s.1.00	This MIB was introduced.

TCP MIB

The TCP MIB module defines the MIB objects for management of Transmission Control Protocol (TCP). Only read-only operation is supported on this MIB through SNMP.

Supported object groups

Objects group name	OID	Supported?
tcpMIB	1.3.6.1.2.1.49	Yes
tcpRtoAlgorithm	1.3.6.1.2.1.6.1	Yes
tcpRtoMin	1.3.6.1.2.1.6.2	Yes
tcpRtoMax	1.3.6.1.2.1.6.3	Yes
tcpMaxConn	1.3.6.1.2.1.6.4	Yes
tcpActiveOpens	1.3.6.1.2.1.6.5	Yes
tcpPassiveOpens	1.3.6.1.2.1.6.6	Yes
tcpAttemptFails	1.3.6.1.2.1.6.7	Yes
tcpEstabResets	1.3.6.1.2.1.6.8	Yes
tcpEstabResets	1.3.6.1.2.1.6.9	Yes
tcpInSegs	1.3.6.1.2.1.6.10	Yes
tcpOutSegs	1.3.6.1.2.1.6.11	Yes
tcpRetransSegs	1.3.6.1.2.1.6.12	Yes
tcpConnTable	1.3.6.1.2.1.6.13	Yes
tcpInErrs	1.3.6.1.2.1.6.14	Yes
tcpOutRsts	1.3.6.1.2.1.6.15	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

UDP MIB

Usage Guidelines

The UDP MIB module defines the MIB objects for management of User Datagram Protocol (UDP). Only read-only operation is supported on this MIB through SNMP.

Supported object groups

Object group name	OID	Supported?
udpMIB	1.3.6.1.2.1.50	Yes
udpInDatagrams	1.3.6.1.2.1.7.1	Yes
udpNoPorts	1.3.6.1.2.1.7.2	Yes
udpInErrors	1.3.6.1.2.1.7.3	Yes
udpOutDatagrams	1.3.6.1.2.1.7.4	Yes
udpTable	1.3.6.1.2.1.7.5	Yes

History

Release version	History
17s.1.00	This MIB was introduced.

Supported Enterprise MIB objects

CONTEXT-MAPPING-MIB overview

The descriptions of the MIB variables in this chapter come directly from the bcsiModules. The notes that follow the descriptions typically pertain to Extreme-specific information as provided by Extreme.

The MIB module is for VRF Context Mapping feature.

Objects and OID	Access	Description
BcmContextMappingMIB 1.3.6.1.4.1.1588.3.1.5	None	This MIB module represents the VRF Context Mapping feature.
bcmContextMappingTable 1.3.6.1.4.1.1588.3.1.5.1	Not accessible	This table provides mapping of SNMP context (represented by the value of 'vacmContextName') to various entities within entities contained within the managed device.
bcmContextMappingEntry 1.3.6.1.4.1.1588.3.1.5.1.1	Not accessible	This MIB module represents the VRF Context Mapping feature. An entry in this table represents a conceptual entry (row). Each entry represents a Context and has all the mapping information of the managed device.
bcmContextMappingVacmContextName 1.3.6.1.4.1.1588.3.1.5.1.1.1	Not accessible	This MIB module represents the VRF Context Mapping feature. This object is a human readable name identifying a specific SNMP VACM context of a specific SNMP entity.
bcmContextMappingVrfName 1.3.6.1.4.1.1588.3.1.5.1.1.2	Read-only	This MIB module represents the VRF Context Mapping feature. The value of an instance of this object identifies the name given to the VRF to which the SNMP context is mapped.

History

Release version	History
17s.1.00	This MIB was introduced.

High Availability MIB overview

The HA-MIB provides information about the High Availability features of SLX-OS. The descriptions of each of the MIB variables in this chapter come directly from the HA-MIB itself.

The object types in HA-MIB are organized into the following groups:

- High Availability group
- HA-MIB traps

Objects and OID	Access	Description
haStatus 1.3.6.1.4.1.1588.2.1.2.1.1	None	Indicates whether the system is redundant.

History

Release version	History
17s.1.00	This MIB was introduced.

High Availability - FRU table

Objects and OID	Access	Description
fruTable 1.3.6.1.4.1.1588.2.1.2.1.5	None	This table inventories the available FRU slots. This table contains an entry for each entry in the entPhysicalTable that has entPhysicalClass set to "Container (5)" and has a child entry having entPhysicalIsFRU set to "true (1)".
fruClass 1.3.6.1.4.1.1588.2.1.2.1.5.1.1	Read-only	The type of the FRU object that this slot can hold.
fruStatus 1.3.6.1.4.1.1588.2.1.2.1.5.1.2	Read-only	The current status of the FRU object in the slot.
fruObjectNum 1.3.6.1.4.1.1588.2.1.2.1.5.1.3	Read-only	The slot number of the blade and the unit number for everything else.
fruSupplierId 1.3.6.1.4.1.1588.2.1.2.1.5.1.4	Read-only	The supplier ID.
fruSupplierPartNum 1.3.6.1.4.1.1588.2.1.2.1.5.1.5	Read-only	The supplier part number.
fruSupplierSerialNum 1.3.6.1.4.1.1588.2.1.2.1.5.1.6	Read-only	The supplier serial number.
fruSupplierRevCode 1.3.6.1.4.1.1588.2.1.2.1.5.1.7	Read-only	The supplier revision code.
fruPowerConsumption 1.3.6.1.4.1.1588.2.1.2.1.5.1.8	Read-only	The power consumption of the switch blades. This object has values only for core and switch blades. For other FRUs, this object returns zero.

History

Release version	History
17s.1.00	This MIB was introduced.

High Availability - FRU history table

Objects and OID	Access	Description
fruHistoryTable 1.3.6.1.4.1.1588.2.1.2.1.6	None	This table gives the contents of the entire history log of the FRU events.
fruHistoryIndex 1.3.6.1.4.1.1588.2.1.2.1.6.1.1	Read-only	Index of the FRU event in the history table.
fruHistoryClass 1.3.6.1.4.1.1588.2.1.2.1.6.1.2	Read-only	The type of the FRU object related to the event.
fruHistoryObjectNum 1.3.6.1.4.1.1588.2.1.2.1.6.1.3	Read-only	The slot number of the blade and the unit number for everything else.
fruHistoryEvent 1.3.6.1.4.1.1588.2.1.2.1.6.1.4	Read-only	The type of the FRU event.
fruHistoryTime 1.3.6.1.4.1.1588.2.1.2.1.6.1.5	Read-only	The time this event happened.
fruHistoryFactoryPartNum 1.3.6.1.4.1.1588.2.1.2.1.6.1.6	Read-only	The factory part number of the FRU object.
fruHistoryFactorySerialNum 1.3.6.1.4.1.1588.2.1.2.1.6.1.7	Read-only	The factory serial number of the FRU object.

History

Release version	History
17s.1.00	This MIB was introduced.

High Availability - CP table

Objects and OID	Access	Description
cpTable 1.3.6.1.4.1.1588.2.1.2.1.7	None	This table lists all the control cards in the system.
cpStatus 1.3.6.1.4.1.1588.2.1.2.1.7.1.1	Read-only	The current status of the control card.
cpIpAddress 1.3.6.1.4.1.1588.2.1.2.1.7.1.2	Read-only	The IP address of the Ethernet interface of this control card.
cpIpMask 1.3.6.1.4.1.1588.2.1.2.1.7.1.3	Read-only	The IP mask of the Ethernet interface of this control card.
cpIpGateway 1.3.6.1.4.1.1588.2.1.2.1.7.1.4	Read-only	The IP address of the IP gateway for this control card.
cpLastEvent 1.3.6.1.4.1.1588.2.1.2.1.7.1.5	Read-only	The last event related to this control card.

History

Release version	History
17s.1.00	This MIB was introduced.

High Availability - MIB traps

Trap name and OID	Varbinds	Description
fruStatusChanged 1.3.6.1.4.1.1588.2.1.2.2.0.1	entPhysicalName fruStatus fruClass fruObjectNum	This trap is sent when the status of any FRU object is changed.
cpStatusChanged 1.3.6.1.4.1.1588.2.1.2.2.0.2	cpStatus cpLastEvent swID swSsn	This trap is sent when the status of any control card object is changed.
fruHistoryTrap 1.3.6.1.4.1.1588.2.1.2.2.0.3	fruHistoryClass fruHistoryObjectNum fruHistoryEvent fruHistoryTime fruHistoryFactoryPartNum fruHistoryFactorySerialNum	This trap is sent when an FRU is added or removed.

History

Release version	History
17s.1.00	This MIB was introduced.

Optical Lane Monitoring table

The following table displays the optical parameters table per lane for a 100G LR4 and LR10 optic.

Objects and OID	Access	Description
bcsiOptMonLaneTable 1.3.6.1.4.1.1588.3.1.8.1.1	None	This table lists the instrumented parameters of all lanes within a 40 G optic of type SR4 and LR4, 100G optic of type LR4 and LR10. LR4 and SR4 have 4 lanes per optic and LR10 has 10 lanes per optic.
bcsiOptMonLaneNum 1.3.6.1.4.1.1588.3.1.8.1.1.1.1 Syntax: Unsigned32	None	This objects is the lane number of the 40G and 100G optic. LR4 and SR4 have 4 lanes per optic and LR10 has 10 lanes per optic.
bcsiOptMonLaneTemperature 1.3.6.1.4.1.1588.3.1.8.1.1.1.2 Syntax: SNmpAdminString	Read-only	This object holds the value of the transmitter laser diode temperature for the lane in the interface. Indicates the health of the transmitter. The format is xxx.yyyy C (Celcius), followed by whether the measured value is normal, high/low alarm, or high/low warning.
bcsiOptMonLaneTxPowerStatus 1.3.6.1.4.1.1588.3.1.8.1.1.1.3 Syntax: Integer	Read-only	This object holds the value of the transmitter optical signal power for the lane in the interface, measured in dBm, followed by whether this is a this is a normal value, or high or low warning or alarm.
bcsiOptMonLaneTxPower 1.3.6.1.4.1.1588.3.1.8.1.1.1.4 Syntax: SnmpAdminString	Read-only	This object holds the value of the receiver optical signal power for the lane in the interface, measured in dBm, followed by whether this is a normal value, or high/low warning or alarm.
bcsiOptMonLaneTxPowerVal 1.3.6.1.4.1.1588.3.1.8.1.1.1.5 Syntax: Unsigned32	Read-only	The value of the transmitter optical signal power for the lane in the interface, measured in microWatt.
bcsiOptMonLaneRxPowerStatus 1.3.6.1.4.1.1588.3.1.8.1.1.1.6 Syntax: Integer	Read-only	The status of the receiver optical signal power for the lane in the interface, indicating whether this is normal or an alarm is present.
bcsiOptMonLaneRxPower 1.3.6.1.4.1.1588.3.1.8.1.1.1.7 Syntax: SnmpAdminString	Read-only	The value of the receiver optical signal power for the lane in the interface, measured in dBm, followed by whether this is a normal value, high/low warning, or an alarm.
bcsiOptMonLaneRxPowerVal 1.3.6.1.4.1.1588.3.1.8.1.1.1.8 Syntax: Unsigned32	Read-only	The value of the receiver optical signal power for the lane in the interface, measured in microWatt.
bcsiOptMonLaneTxBiasCurrent 1.3.6.1.4.1.1588.3.1.8.1.1.1.9 Syntax: SnmpAdminString	Read-only	The Tx Bias Current. It is measured in mA, and is followed by whether this is a normal value, high/low warning, or an alarm.

History

Release version	History
17s.1.00	This MIB was introduced.

SW-MIB overview

The descriptions of the MIB variables in this chapter come directly from the Switch MIB. The notes that follow the descriptions typically pertain to Extreme-specific information as provided by Extreme.

TABLE 11 Switch base MIB

Objects and OID	Access	Description
sw 1.3.6.1.4.1.1588.2.1.1.1	None	The OID sub-tree for the Brocade Silkworm Series of Fibre Channel Switches.

TABLE 12 Switch system group MIBs

Objects and OID	Access	Description
swSystem 1.3.6.1.4.1.1588.2.1.1.1.1	None	The MIB module is for system information.
swCurrentDate 1.3.6.1.4.1.1588.2.1.1.1.1.1	Read-only	The object displays the current date in textual format.
swBootDate 1.3.6.1.4.1.1588.2.1.1.1.1.2	Read-only	The date and time when the system last booted.
swFWLastUpdated 1.3.6.1.4.1.1588.2.1.1.1.1.3	Read-only	The date when the firmware was last updated to the switch.
swFlashLastUpdated 1.3.6.1.4.1.1588.2.1.1.1.1.4	Read-only	The date and time when the flash was last updated.
swBootPromLastUpdated 1.3.6.1.4.1.1588.2.1.1.1.1.5	Read-only	The date and time when the Boot PROM was last updated.
swFirmwareVersion 1.3.6.1.4.1.1588.2.1.1.1.1.6	Read-only	The current version of the firmware.
swOperStatus 1.3.6.1.4.1.1588.2.1.1.1.1.7	Read-only	The current operational status of the switch. Possible values: • online (1) - The switch is accessible by an external FC port. • offline (2) - The switch is not accessible. • testing (3) - The switch is in a built-in test mode and is not accessible by an external Fibre Channel port. • faulty (4) - The switch is not operational.
swFlashDLOperStatus 1.3.6.1.4.1.1588.2.1.1.1.1.11	Read-only	The operational status of the flash. Possible values: • unknown (0) - Indicates that the operational status of the flash is unknown. • swCurrent (1) - Indicates that the flash contains the current firmware image or configuration file. • swFwUpgraded (2) - Indicates that the flash contains the upgraded image from the swFlashDLHost.0. • swCfUploaded (3) - Indicates that the switch configuration file has been uploaded to the host. • swCfDownloaded (4) - Indicates that the switch configuration file has been downloaded from the host.

TABLE 12 Switch system group MIBs (continued)

Objects and OID	Access	Description
		• swFwCorrupted (5) - Indicates that the firmware in the flash of the switch is corrupted.
swFlashDLAdmStatus 1.3.6.1.4.1.1588.2.1.1.1.1.12	Read-write	The state of the flash. Possible values: • swCurrent (1) - The flash contains the current firmware image or configuration file. • swFwUpgrade (2) - The firmware in the flash is to be upgraded from the host specified. • swCfUpload (3) - The switch configuration file is to be uploaded to the host specified. • swCfDownload (4) - The switch configuration file is to be downloaded from the host specified. • swFwCorrupted (5) - The firmware in the flash is corrupted. This value is for informational purposes only; however, setting swFlashDLAdmStatus to this value is not allowed.
swBeaconOperStatus 1.3.6.1.4.1.1588.2.1.1.1.1.18	Read-only	The current operational status of the switch beacon. Possible values: • on (1) - The LEDs on the front panel of the switch run alternately from left to right and right to left. The color is yellow. • off (2) - Each LED is in its regular status, indicating color and state.
swBeaconAdmStatus 1.3.6.1.4.1.1588.2.1.1.1.1.19	Read-write	The desired status of the switch beacon. Possible values: • on (1) - The LEDs on the front panel of the switch run alternately from left to right and right to left. Set the color to yellow. • off (2) - Set each LED to its regular status, indicating color and state.
swDiagResult 1.3.6.1.4.1.1588.2.1.1.1.1.20	Read-only	The result of the power-on self-test (POST) diagnostics. Possible values: • sw-ok (1) - The switch is okay. • sw-faulty (2) - The switch has experienced an unknown fault. • sw-embedded-port-fault (3) - The switch has experienced an embedded port fault.
swNumSensors 1.3.6.1.4.1.1588.2.1.1.1.1.21	Read-only	The number of sensors inside the switch.
swEtherIPAddress 1.3.6.1.4.1.1588.2.1.1.1.1.25	Read-only	The IP address of the Ethernet interface of this logical switch.
swEtherIPMask 1.3.6.1.4.1.1588.2.1.1.1.1.26	Read-only	The IP mask of the Ethernet interface of this logical switch.
swIPv6Address 1.3.6.1.4.1.1588.2.1.1.1.1.29	None	The IPv6 address.
swIPv6Status 1.3.6.1.4.1.1588.2.1.1.1.1.30	None	The current status of the IPv6 address. Possible values: • tentative (1) • preferred (2) • ipdeprecated (3)

TABLE 12 Switch system group MIBs (continued)

Objects and OID	Access	Description
		• inactive (4)

History

Release version	History
17s.1.00	This MIB was introduced.

swSensorTable

Objects and OID	Access	Description
swSensorTable 1.3.6.1.4.1.1588.2.1.1.1.1.22	None	The table of sensor entries.
swSensorIndex 1.3.6.1.4.1.1588.2.1.1.1.1.22.1.1	Read-only	The index of the sensor.
swSensorType 1.3.6.1.4.1.1588.2.1.1.1.1.22.1.2	Read-only	The type of sensor. Possible values: • temperature (1) • fan (2) • power-supply (3)
swSensorStatus 1.3.6.1.4.1.1588.2.1.1.1.1.22.1.3	Read-only	The current status of the sensor. Possible values: • unknown (1) • faulty (2) • below-min (3) - The sensor value is below the minimal threshold. • nominal (4) • above-max (5) - The sensor value is above the maximum threshold. • absent (6) - The sensor is missing.
swSensorValue 1.3.6.1.4.1.1588.2.1.1.1.1.22.1.4	Read-only	The current value (reading) of the sensor. The unknown value -2147483648 indicates the maximum value of integer value; it also means that the sensor does not have the capability to measure the actual value. The temperature sensor value is in Celsius, the fan value is in RPM (revolutions per minute), and the power supply sensor reading is unknown.
swSensorInfo 1.3.6.1.4.1.1588.2.1.1.1.1.22.1.5	Read-only	Additional information on the sensor. It contains the sensor type and number, in textual format; for example: Temp 3, Fan 6, and so on.

History

Release version	History
17s.1.00	This MIB was introduced.

swEventTable

Objects and OID	Access	Description
swEvent 1.3.6.1.4.1.1588.2.1.1.1.8	None	The OID sub-tree for the switch event group.
swEventTable 1.3.6.1.4.1.1588.2.1.1.1.8.5	Read-only	The table of event entries.
swEventIndex 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.1	Read-only	This object identifies the event entry.
swEventTimeInfo 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.2	Read-only	The date and time that this event occurred.
swEventLevel 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.3	Read-only	The severity level of this event entry. Possible values: • critical (1) • error (2) • warning (3) • informational (4) • debug (5)
swEventRepeatCount 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.4	Read-only	This object indicates the number of times this particular event has occurred.
swEventDescr 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.5	Read-only	A textual description of the event.
swEventVfid 1.3.6.1.4.1.1588.2.1.1.1.8.5.1.6	Read-only	This object identifies the Virtual Fabric ID.

History

Release version	History
17s.1.00	This MIB was introduced.